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22 Hillcrest,
Pembroke Wood,
Passage West,
Co. Cork.

An Bord Pleanála,
64 Marlborough Street,
Dublin 1.

11th March, 2022.

REQUEST TO MAKE AN APPEAL

Planning authority: Cork County Council

Planning application ref: 20/6955

Applicant: Gouldings Chemicals Ltd./Belvelly Marino Development Company DAC (BMDC)

Proposed development: Construction of a new agricultural fertiliser facility for use by Gouldings Chemicals Ltd. and additional port operational use of the jetty to facilitate cargo vessels. The agricultural fertiliser facility will be constructed to the north of the site and will comprise:

- i. A bulk storage building for the storage of granular fertiliser**
- ii. A building accommodating a bagging and palletising facility and staff facilities**
- iii. External paved product storage areas for the storage of bagged fertiliser**
- iv. Weighbridge, office building, ESB substation and switch room**
- v. Vehicle store**
- vi. Surface water drainage system and water retention tank**
- vii. Truck parking, staff and visitor parking, fertiliser waste storage tank and all ancillary site works.**

Dear Sir/Madam,

I wish to appeal the decision made by Cork County Council to grant permission for the above development at Marino Point, Co. Cork.

I make this appeal on my own behalf and on the behalf of constituents in Passage West who have made their concerns in relation to this development known to me. Passage West is a town that has lived with a dock at its heart since 1832. It is a town that has lived for 25 years with fertiliser activity at Marino

Point. It has unparalleled knowledge of the potentially negative impacts of proximity to both industries. Therefore I also make this appeal on behalf of my town of Passage West.

This planning application from Gouldings/BMDC for Marino Point follows a planning permission granted on appeal by An Bord Pleanála to BMDC for demolition, site infrastructure improvements and utility upgrade works at Marino Point for future industrial development proposals (ABP ref. 307938). I have read the Inspector's Report pertaining to that planning application. At the outset, I will respectfully take the opportunity to make a number of relevant points clear.

1. Passage West is the second largest settlement in the Carrigaline Municipal District. It currently has a population of 5,800 and a population growth target of 6,965 defined in the Ballincollig-Carrigaline Municipal District Local Area Plan 2017. It is a settlement that previously had its own Town Council. It is not a "village" as referred to in the Inspector's Report on ABP 307938.
2. The closest sensitive receptor in Passage West to the Marino Point jetty is the municipal library and premises of the Passage West Association of Care for the Elderly. It is 465 metres from the Marino Point jetty. Apartments on Steampacket Quay are 500 metres from the Marino Point jetty. Passage West may be "on the opposite side of Cork Harbour" as described in the Inspector's Report (ref. ABP 307938) but those separation distances are little more than the width of the harbour. This part of Cork Harbour is called the West Passage, referred to colloquially as "the river" or "the channel". It connects Upper Cork Harbour to Lower Cork Harbour. Historically, the harbour ferry ran between Passage West and the Great Island because this was the shortest distance to row. Mail destined for Cobh was distributed through Passage West, brought across on this ferry. If it were land rather than water between Passage West and Marino Point, it would take approximately 6 minutes to walk from one side to the other.
3. I am aware that the re-energising of the former IFI site and jetty at Marino Point for port-related development is consistent with regional, local and national policy. I am also aware that relocation of the Gouldings facility at Centre Park Road is an important step towards realising the aims of Cork City Council's South Docks Local Area Plan 2001.
4. This notwithstanding, the Cobh Municipal District Local Area Plan 2017 has a clear statutory requirement for any development at Marino Point to have regard to the proximity of Passage West:

"In permitting development, regard shall be had to mitigating potential adverse impacts, particularly for the adjacent residential settlement of Passage West."

Please note how Cork County Council recognises that Passage West is adjacent to Marino Point rather than "on the opposite side of Cork Harbour" as described by the Board's Senior Inspector (ref. ABP 307938). Therefore 'land uses in the vicinity' do indeed comprise a settlement of significant size with a notable density of residential properties (ref. ABP 307938).

5. The Marino Point site is a brownfield site as described by the Board's Senior Inspector (ref. ABP 307938) on which there is an established industrial plant (Marinochem). However, the former IFI site has been vacant for the past 20 years. Twenty years ago, Passage West was a town of 4,184 people (CSO, 2002). Most of the extensive residential estates in the town have been developed since that time during the Celtic Tiger years. Therefore 30% of those living in Passage West now have never known industrial activity at Marino Point. In reality, many others who lived during the

IFI years have passed on, so the percentage is likely higher. Regardless, it is neither fair nor accurate to describe the former IFI site as having a “recent history of industrial use” (ref. ABP 307938).

Regardless of its zoning, this planning application from Gouldings/BMDC is for what is in large part a new industrial facility. It is close to the Passage West shoreline and immediately adjacent to a site designated as part of the Natura 2000 network. It is in a central location in Cork’s Upper Harbour and is clearly visible from a range of residential areas and designated scenic routes. If a new industry for the handling of nutrient-rich cargo is to develop at Marino Point with intensified use of the existing jetty, then it simply is not good enough to consider that new industry as relocation of an existing industry to a revamped brownfield site with an existing industrial zoning. This new industry needs to be supported by the best of new technology to ensure minimal negative impact on existing residents, ecological habitats and Cork Harbour.

On this basis, the grounds of my appeal are as follows:

1. The impact of noise, in particular night-time noise, from the proposed industry would significantly threaten residential amenity in the adjacent town of Passage West.
2. The proposed industry poses unacceptable risk to water quality in Lough Mahon and consequently threatens the integrity of the adjacent Natura 2000 network sites.
3. No alternatives to a development that is premature at the proposed location have been considered.

1. The impact of noise, in particular night-time noise, from the proposed industry would significantly threaten residential amenity in the adjacent town of Passage West.

The night-time sleep of Passage West residents living closest to Marino Point is already affected by the limited shipping activity that takes place at the jetty. I spoke about this in my submission to ABP 307938, appended and in my original submission to this planning application, also appended.

The assessment of noise impact from the proposed development carried out by Cork County Council is vastly inadequate to protect the night-time sleep of Passage West residents. Data provided in the applicant’s EIAR is inadequate. Cork County Council did not seem to identify this. Anyone familiar with shipping, as we are in Passage West, would have seen those data deficits.

It is critical to emphasise that nothing separates Marino Point jetty activity from sensitive receptors at Passage West. They are the closest sensitive receptors to Marino Point. They are closer than residential homes at Carrigaloe, closer than the most proximate cluster of houses on the R624. If it were 465 metres of land between the Marino Point jetty and the Passage Association of Care for the Elderly, that land would naturally attenuate sound. Trees and shrubs would absorb some of its impact. But water is a hard surface. It is the most acoustically hard of all materials (TFK, 2013) with virtually no noise attenuation properties. In other words, it easily conducts noise. Cork County Council’s assessment of the noise impact from the proposed development provides no comfort that this is actually understood.

As an example, some Monkstown residents experience significant impact on their residential amenity arising from shipping at the Port of Cork's Deep Water Berth at Ringaskiddy. Cork County Council is aware of this. Monkstown is over 1 km from the Deep Water Berth, largely separated only by water. Depending on the noise source and the listening individual, it can sometimes be residents on the higher slopes of Monkstown who experience certain noises most. Scotsman's Road, approximately 1.8km from Ringaskiddy and at a significantly higher level, can have particularly negative experiences. In this case, the combination of water's inability to attenuate sound and the Monkstown topography makes it especially difficult to protect residential amenity.

The TFK Transport Institute (2013) tells us that:

“The variation between the individual's reactions to noise is great. The mere loudness of a noise cannot explain why some individuals develop noise-related symptoms and others do not. The noise source, its meaning to the individual, qualities, occurrence over time, familiarity, controllability and predictability affect these reactions. Noise sensibility is a personality attribute independent from noise exposure, and 25-43 per cent of the population has been classified as noise sensible in different studies. That is why noise annoyance cannot be measured only by noise mappings.”

Noise modelling conducted on behalf of the applicant produced noise maps. These, included in the EIAR, are purported to illustrate that predicted noise from either the proposed Gouldings facility or the proposed jetty intensification will not impact unduly on Passage West and area surrounding Marino Point. The input to that noise model does attribute zero absorption of sound to water. But the model used is two dimensional. It takes no account of the steep topography of Passage West and the consequent reflections, deflections and diffractions that may potentially amplify noise at the Passage West receiver. In addition, it has three huge gaps:

- It assumes that proposed mitigation measures will eliminate impulse and tonal sound. They are therefore not accounted for.
- It is silent on the difficulty of mitigating low-frequency noise and does not weight accordingly.
- It assumes no night-time noise and therefore does not assess its impact at all.

Noise from the proposed Gouldings facility is relatively predictable. But because so many different activities are carried out at a port, noise from the jetty would be far more diverse. Moreover, hours of operation at the Gouldings facility are predictable: typically until 5pm, Monday – Friday with the exception of the peak February – April period when operations may continue until midnight. On the other hand, jetty operations are expected to take place from 7am – 7pm, Monday – Saturday inclusive although, as described in Section 2.6.3.2.3, *“there may be the rare occasions when loading/unloading may need to take place outside these times for operational and safety reasons”*. This latter is the noise that is of greatest concern to residential amenity in Passage West and it receives virtually no attention at all in Cork County Council's assessment.

Noise annoyance is not directly dependent on the decibel level. Momentary or impulse sounds, sounds with tonal elements and low frequency sounds are often experienced as more disturbing than broadband sounds with a low variation such as average traffic noise which is quite monotonic in character. Should these sounds occur during the night when the daytime hum is dimmed, they can be especially difficult.

Impulse noise is typical for cargo operations, particularly the handling of large machinery which is identified as being expected at the Marino Point jetty. We in Passage West are especially familiar with impulse noises from cargo handling. The Passage West Dockyard stores and exports scrap metal. Significant impulse noise is experienced both when the lorries are unloading scrap, when the scrap heap is being handled and when the scrap is being loaded into the empty hold of a ship. Cork County Council's Environment Officer picked up on the potential for handling of machinery parts to cause impulse noise. I consider that her query in this regard was inadequately dealt with in the applicant's Further Information. She also asked about tonal and/or impulsive noise from night-time working at the proposed fertiliser plant. This was responded to in the Further Information submitted in October 2020. The response speaks of flat-spectrum alarms to eliminate tonal noise from forklifts and loaders and smoothing of yard surfaces to eliminate clanging from forklifts. This is all very well but what about the forklifts, loaders, yard surfaces and other potentially impulsive night-time noise sources at the jetty? On those occasions when loading/unloading takes place outside the predicted 7am – 7pm?

The Further Information states that no tonal emissions are expected from operations at the proposed fertiliser facility. It does not mention tonal emissions from the jetty. Section 14.3.2.4 of the EIAR states that fertiliser-carrying vessels typically shut down their engines while docked. No such assurance is given for other vessels using the jetty. But regardless, whether or not a ship's engines are shut down, that statement refers to the ship's main engines – those used for propulsion. Even when these engines are off, the ship will create noise. Vessels run generators (or auxiliary engines) to produce the electricity their crew needs during the time they are berthed. Noise from auxiliary engines or generators creates night-time noise and it is this which keeps Passage West residents awake. There is not ONE mention of generators in either the EIAR or the Further Information supplied by the applicant. **Cork County Council has received countless complaints in relation to shipping-related night-time generator noise at both Ringaskiddy and Passage West and has yet not asked the applicant one single question in this regard.**

Generators (or auxiliary engines) emit tonal noise. This is well known. Arveson et al. (2000) analysed radiated noise data from a bulk cargo ship, demonstrating high-level tonal frequencies from the ship's service diesel generator, main engine firing rate and blade rate harmonics due to propeller cavitation. Research carried out by the Danish Fishermen's Occupational Health Service in 2000 showed that the frequency from a generator when a vessel is in port where no other machinery is in use will create pure tone noise. Other rotating equipment on ships such as pumps, ventilators, fans and compressors typically also emit tonal noise.

Whilst conspicuous impulsive or tonal noises can lead to increased nuisance at sensitive receptors, most nuisance perceived by residents living near ports is caused by low frequency noise. This is noise with a sound energy level typically lower than 160 Hz. It is well recognised that the nuisance and perception of loudness is often greater for low frequency noise than for noise in the higher frequency range with the same decibel level. Subjectively, low frequency noise is often experienced as a humming or buzzing sound. Because low frequency noise is less well absorbed by air, it is less attenuated on the propagation pathway than high frequency noise. It is less effectively attenuated by building facades so unless it is muffled by a silencer on a vessel, it can transmit from the outside to the inside of a building more easily than a higher frequency sound (Neptunes, 2019).

Generators (and auxiliary engines) emit low frequency noise. The diesel engine exhaust is often placed at the top of a funnel which can be significantly higher than the surrounding landscape. Generator noise can therefore propagate over large distances without being reflected or absorbed by the surroundings (Danish Ministry for the Environment, 2010).

The exhaust noise from a ship's diesel generator is located mainly in the 40 - 160Hz frequency range with the 80Hz-band dominating. This has NOT been included in the predictive modelling carried out on behalf of BMDC/Gouldings at all.

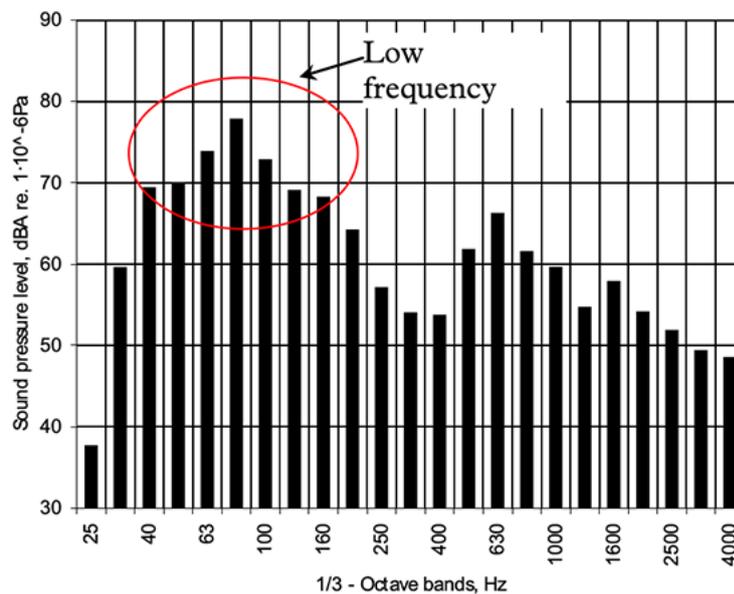


Figure 3 MEASURED A-WEIGHTED SOUND PRESSURE LEVEL, dB(A) re. 20 µPa, IN 1/3-OCTAVE BANDS, AT APPROXIMATELY 5 METERS DISTANCE FROM A WÄRTSILÄ W6L32 3000kW / 720 RPM ENGINE EXHAUST STACK OUTLET. AN ABSORPTION TYPE SILENCER IS INSTALLED IN THE EXHAUST STACK.

From: Danish Ministry for the Environment (2010).

Noise from Ships in Ports: Possibilities for Noise Reduction. Environmental project No. 1330.

The Port of Cork understands low frequency noise intimately. Because of the growing problem of port-related noise globally, the Noise Exploration Programme to Understand Noise Emitted by Seagoing ships (NEPTUNES) was initiated by 11 ports around the world: Amsterdam, Copenhagen, Malmo, Gothenburg, Hamburg, Koper, New South Wales, Rotterdam, Stockholm, Turku, Vancouver and Cork. Yes, Cork was part of this excellent piece of work which sought to address acoustic nuisance from ships at berth. The programme was divided into four stages:

- 1) Understanding sources of noise pollution,
- 2) Developing a measurement protocol for measuring noise from different moored vessels
- 3) Developing a noise label that would rate different ships in terms of their sound power level and proportion of low frequency sound
- 4) Producing a best practice guide summarising the various actions that could be undertaken to mitigate port noise.

The NETPUNES work confirmed low-frequency noise generated by auxiliary engines (generators) as being generally the most problematic noise from ships at berth. It acknowledges the difficulty in attenuating noise below 160 Hz. It examines the health effects of noise as determined by the World Health Organisation. Critically, it makes recommendations for weighting low frequency noise, for rating the sound impact of individual ships and for mitigation measures at source, during sound propagation and at the receiver.

Having taken part in this international study and being entirely aware of the generation and impact of tonal and low frequency sound from berthed ships at night, it can only be assumed that the complete omission of any mention of 24-hour generators running on berthed ships at the Marino Point jetty was deliberate. It is not possible that this omission was an accidental. This is the noise that keeps residents in Horsehead and Toureen Terrace awake at night. This is the noise about which the Port of Cork has received complaints directly from residents. Moreover, why has Cork County Council not recognised this complete omission from the EIAR?

The NEPTUNES work also highlighted that low frequency noise is a stressor which can lead to headaches, dizziness, insomnia, depression, loss of concentration and distortion of heart rhythm. It echoes the World Health Organisation which advises that long term environmental noise at night causing sleep loss can lead in the short term to “*mood changes, irritability, increased thyroid activity, insulin resistance and immune function impairment*”. In the longer term, health consequences can include “*depression, violence, short-term memory problems, increased sensitivity to pain, diabetes and obesity*”. The combined effects of tiredness and continual sleep loss can have the greatest effect in children and can triple the likelihood of psychiatric disorders (Marcellin, 2019).

The World Health Organisation considers noise to have emerged as the leading environmental nuisance in Europe (Marcellin, 2019). Moreover, its experts consider noise above 40 dB at night to potentially result in sleep disturbance with the kind of health impacts outlined above. The NEPTUNES report states that:

“It may be assumed that the same applies to nuisance from ship-generated noise”.

The Port of Cork was part of this work. Yet the EIAR is absolutely silent on this issue. Although Section 14.3.2.4 states that typically two fertiliser vessels per month are expected with up to four per month at peak, that does not equate to the 1 ship per week anticipated in Section 2.6.3.1 nor with Section 14.3.2.5 which anticipates four fertiliser-related unloading events per month. Each unloading is expected to last 1.5 days, assuming no rain in which case unloading will be delayed until the weather dries up.

BMDC expects some 40 additional vessels from the City Quays to arrive in the year. Section 14.3.2.1 states that ships will typically berth for 1-2 days to offload/load cargo but that they may berth for longer depending on cargo size and weather conditions.

The jetty already services MarinoChem. We know from experience that typically the visiting ship stays 1-2 nights. So realistically, should planning permission be granted, Passage West residents can expect overnight berthing at the Marino Point jetty just about every night of the week. I find it difficult to conclude from the analysis done to date by either the applicant or Cork County Council other than should residential sleep be impacted by generator and other shipping noise, nobody cares.

It is unacceptable that the health and wellbeing of Passage West residents would be impacted in this way.

Further Information submitted in November 2021 states that the nearest residential property to the proposed Gouldings site boundary fence is the house north of Marian Terrace 615 metres away. That might be the case but the Passage West Association of Care for the Elderly is 465 metres away from the Marino Point jetty. It hosts Alcoholics Anonymous meetings at 8pm, evening yoga and meditation

sessions at 8pm and more. The apartments at Steampacket Quay are 500 metres from the jetty. They are homes to families, some with young children. The houses at Toureen are 510 – 560 metres from the jetty whilst the houses at Horsehead are 630 metres away.

Nothing in Cork County Council's assessment or proposed conditional grant of planning provides any hope that night-time noise at the Marino Point jetty would be anything other than a disruptive nuisance.

- Condition 10 proposes that a certified Environmental Management System to include proposals for the control of onsite noise will be agreed. But as Cork County Council did not even question the issue of noise from vessel generators, it is vastly unlikely that any Environmental Management System would ever provide sensitive receptors in Passage West with protection from night-time noise. We are familiar with the ISO 14001-approved Environmental Management System in Ringaskiddy and although I acknowledge that recently the Port of Cork is improving efforts to reduce the impact of noise, the disturbance caused by the deep water berth at Ringaskiddy to residents in Monkstown has already been discussed.
- Condition 10 proposes that Cork County Council would be notified of scheduled night-time working. Clearly in this, Cork County Council is once again considering the proposed Gouldings facility. What about the jetty, where night-time working would be unscheduled? And even if Cork County Council was informed of night-time working at the jetty, what benefits would that bring to affected residents of Passage West?
- Condition 13 instructs that no tonal or impulsive noises are to emanate from the Marino Point site at night-time. What is Cork County Council talking about here? The proposed Gouldings facility or the jetty? Because Cork County Council has simply taken at face-value the applicant's inaccurate assertion that there would be no night-time noise from the jetty at all. When/if it is identified – as it has been worldwide – that the generators on ships berthing overnight have a significantly tonal component, would Cork County Council require BMDC to instruct that the generators would be turned off? After all, the EPA regulations do not allow tonal noises at night-time. Would they require BMDC to provide board and lodging for the ships' crew somewhere else? Of course they would not. What is the point in drafting a condition that can never be implemented?

This is a new facility and the BMDC/Port of Cork is intimately aware of the impact of living close to a port. For a new facility, I expect better than is proposed here. I expect proposals for mitigating night-time noise from a berthed vessel at source. I expect proposals for noise rating of ships and commitments to management of the jetty such that only ships of a certain noise rating would be acceptable. I expect a commitment to accept only vessels which have silencers fitted on their exhausts. I expect a discussion about the potential use of on-shore power. This eliminates the need for generators entirely. I expect the applicant to acknowledge this known problem. I expect an offering of noise protection for affected residents of Passage West, although the installation of triple-glazed windows will never compensate for not being able to open one's bedroom window on a summer's night. We in Cork's Lower Harbour are working with the Port of Cork and living with a dockyard for long enough to know that ports are not silent. We do not expect them to be. But we do above all expect competence, honesty and decency in a fair and transparent assessment of what impact this noise might have and reasonable, modern efforts towards mitigation.

2. The proposed industry poses unacceptable risk to water quality in Lough Mahon and consequently threatens the integrity of the adjacent Natura 2000 network site.

The Natura 2000 site bordering Marino Point is a 1,484 hectare area which includes a Special Area of Conservation (SAC) designated under the Habitats Directive (92/43/EEC) and a Special Protection Area designated under the Birds Directive (79/409/EEC). The Habitats Directive provides for the establishment of a network of core breeding and resting sites for rare and threatened species and some rare natural habitat types which are protected in their own right. Stretching across 18% of the European Union's land area and more than 8% of its marine territory, the aim of the network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats listed under both the Birds Directive (79/409/EEC) and the Habitats Directive (EC, 2022).

The Habitats Directive lists nine marine habitat types and 16 species for which marine site designation is required. The Birds Directive lists a further 60 bird species whose conservation requires marine site protection. The Natura 2000 site adjacent to Marino Point is of ecological importance due to habitats of intertidal mud, sand flats and Atlantic salt meadows. In addition, the area supports 50% of the wintering waterfowl in Cork Harbour including a significant proportion of internationally important populations of Black-tailed Godwit and Common Redshank (Kopke, 2005).

The overriding objective of the Habitats Directive is to ensure that the habitats and species that are the focus of protection achieve “*favourable conservation status*”. Essentially that means that the sum of the influences acting on a designated ecological feature, whether habitat or species, is maintained in a satisfactory condition and that this status is likely to continue into the future (NPWS, 2014).

Development at Marino Point may be permitted only if it can demonstrate that it is compatible with the requirements of both the Habitats Directive and the Birds Directive and with the protection of these sites. I have discussed my concerns about the impact of noise from the proposed development and in particular from the jetty element of that proposed development. As I am strongly of the opinion that the assessment of the impact of noise is incomplete and noise can be a significant disruptor of both designated habitats and species, it is my opinion that the EIAR does not demonstrate an absence of impact on the adjacent SAC and SPA. In this regard, I respectfully draw the Board's attention to an extract from the NPWS's opinion on the effect of disturbance on designated habitats and species:

“Any activity that causes disturbance can lead to the displacement of waterbirds. The significance of the impact that results from even a short-term displacement should not be underestimated. In terms of foraging habitat, displacement from feeding opportunities not only reduces a bird's energy intake but also leads to an increase in energy expenditure as a result of the energetic costs of flying to an alternative foraging area. Displacement also has knock-on ecological effects such as increased competition (within and/or between different species) for a common food source. In areas subject to heavy or on-going disturbance, waterbirds may be disturbed so frequently that their displacement is equivalent to habitat loss. When disturbance effects reduce species fitness (reduced survival or reproductive success) consequences at population level may result.”

(NPWS, 2014)

The Water Framework Directive (2000/60/EC) requires all Member States to prevent deterioration of the status of all waters – surface, ground, estuarine and coastal – and protect, enhance and restore all

waters with the aim of achieving ‘good’ status by 2027. “Good” status is defined in the Directive as where biological and/or chemical qualities are of only minor variation compared to the natural state of the water. With specific relevance to Cork Harbour, the Water Framework Directive also requires general protection of aquatic ecology and protection of unique and valuable habitats.

In terms of achieving WFD objectives, the risk assessment for both Lough Mahon and the Great Island Channel currently classifies both as being At Risk of failing to achieve the Water Framework Directive’s objectives. The status of the Lough Mahon estuarine waters was Good for the period 2007 – 2009, but has since declined to Moderate. The status of the Great Island Channel was Moderate for the 2007 – 2009 period, improved to Good for the subsequent 2013 – 2015 period but has since declined again to Moderate.

To be fair, during the 1990s water quality in Lough Mahon was significantly worse than it is now. At that time, Cork City had no wastewater treatment. The Carrigrenan treatment plant was commissioned and became operational in 2004, discharging an average of 95,000 m³/day to Lough Mahon with a peak of 162,000 m³/day (OPW, 2014). Since that time, water quality has noticeably improved. However, the Environmental Protection Agency (EPA, 2018) advises that elevated nutrients are the dominant issue for transitional coastal waterbodies such as Lough Mahon and the Great Island Channel which are At Risk of not meeting their water quality objectives. This is reflected in the outflow from the Carrigrenan treatment plant. In recent years it has experienced recurring challenges with achieving its required effluent quality standards for total phosphorus (TP) and Total Nitrogen (TN). The TP problem appears to now have been resolved with the addition of ferric dosing at the plant. The TN issue continues however and the Carrigrenan plant experienced 19 breaches of its TN discharge limits in 2021 (EPA, 2022). As the Urban Waste Water Directive (91/271/EEC) requires a water body to be identified as a sensitive area if the waters may become eutrophic without protective action, Lough Mahon is now designated a Nutrient Sensitive Area.

Lough Mahon and the Great Island Channel are therefore of huge sensitivity and vulnerability, experiencing ongoing flux. They are waters to which legislative standards apply. Achieving these standards is an ongoing challenge. The proposed development is to establish a fertiliser handling and bagging facility in this sensitive area. In any language, under these circumstances this would seem to be a strange choice of location.

The applicants have outlined a range of mitigation measures aimed at minimising the impact of their proposed activities on the quality of the Lough Mahon waters. However **it is not possible to see how their proposed use of a grab and hopper for offloading bulk fertiliser could possibly be best practice in this location.**

Because the Baltic Sea is largely enclosed, significant investigative work has been done on how ports on the Baltic shoreline can minimise nutrient losses from the handling of fertiliser. The Baltic Marine Environment Protection Commission (2017) has identified that

“nutrient losses from ports facilities for handling fertiliser and fertiliser-related materials can constitute considerable point sources of nutrient pollution (up to several tons of directly bioavailable nitrogen and

phosphorus per year)”. They report experts as estimating that about 0.05% of bulk cargo can be lost through unloading and washing of cargo-contaminated surfaces and holds. They further clarify that *“most dry bulk commodities are prone to spillage and dust pollution, posing environmental problems even for ports which handle comparatively low tonnages”*.

Using a team of experts from Germany, Finland and Russia, Ramboll (2020) analysed fertiliser cargo handling practices at 15 ports on the Baltic Sea. From interviews conducted at each of these ports, they ascertained that 80% to 90% of ships wash their hold after each cargo. Their conclusion was that there is *“no doubt”* but that fertiliser cargo is released into the environment during the cargo handling process and from cleaning the cargo holds because of a lack of washwater reception facilities.

BMDC proposes to use a closed clamshell grab for offloading bulk fertiliser from visiting vessels. For sure a closed grab is better than an open grab but the performance of a grab is critically dependent on both the quality of the grab and operator expertise. BMDC states that all operators will be trained. In the Further Information submitted in December 2021, it comments on the *“effectiveness of standard operating procedures for this cargo type (grab and hopper)”* which have *“proven to be effective at the Deep Water Berth at Ringaskiddy”*. It states that *“it does not consider that a vacuum system or other enclosed offloading system would be warranted”*.

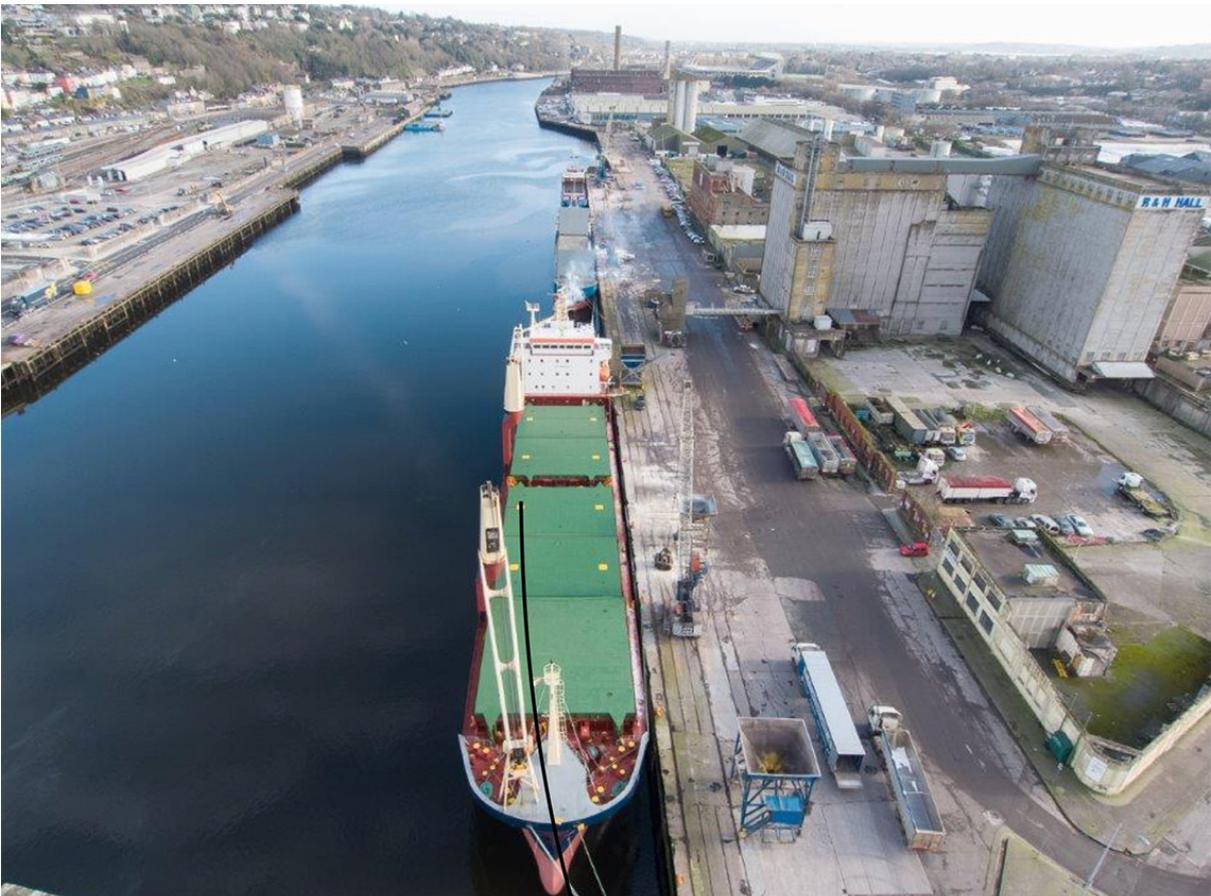
If employing Best Available Technology to minimise the loss of fertiliser dust is not warranted in waters designated as Nutrient Sensitive, At Risk of not meeting required Water Framework Directive targets and immediately adjacent to designated habitats, then where is it warranted?

Material losses from grab and hopper offloading are inevitable, regardless of best effort. They occur at the City Quays and they occur at the Deep Water Berth at Ringaskiddy. I am a member of a community group called PortWatch, established in an effort to reduce the impact of ports in Cork Harbour on the environment and residential amenity. From their birds eye view in Monkstown, members of PortWatch have in the recent past had to point out to the Port of Cork when material was being lost during offloading using a clamshell grab of the type proposed for Marino Point. In response, the Port of Cork apologised and acknowledged that standard operating procedure was for the operator to cease unloading when it became evident the grab was leaking. Mistakes happen – that is fair enough. But the point of this illustration is that when mistakes happen in a sensitive location such as Lough Mahon, the cumulative consequences can lead to legislative failure.

Because of public health restrictions at the time, public consultation for this proposed development was held on-line. A presentation was hosted on the Port of Cork’s website (Gouldings/BMDC, 2020). The following image from this presentation presumably illustrates typical Port of Cork offloading at the Deep Water Berth at Ringaskiddy. Please note material lost during that offloading, both on the side of the visiting ship and on the quayside. This offloading was presumably done in accordance with the standard operating procedures referred to in the planning application.



The following image is also taken from that same presentation. Presumably it was included to illustrate offloading of what appears to be bulk fertiliser as it currently happens at the City Quays. If so, although this is the same material that the planning application assures is of a granular nature, density and size that minimises the risk of losses, it appears from the white quayside that losses do indeed occur.



The following image is one of several published by photographer David Creedon from what is described as offloading of Calcium Magnesium at Cork's City Quays on 14th July, 2020. (Presumably this was intended to read Calcium/Magnesium). These images are available at <https://www.alamy.com/stock-photo/offloaded-cargo.html>. On the 14th July 2020, Met Eireann's historical records tell us that wind speed was 13.2 knots, i.e. 25.7 knots. It is reasonable to expect that the cargo being unloaded falls under the "other granular mineral based materials" category described in the Gouldings letter submitted in December 2021 as part of Further Information.



Passage West is a shipping town. We understand that even with the best of efforts, material losses happen. What is not acceptable is that the applicant would not acquiesce to employing the best of technology to minimise the impact of these losses in a particularly sensitive area such as Lough Mahon. Experts from Ramboll (2020) are of the stated opinion that "screw and pneumatic unloaders supplying cargo directly to closed conveyor systems are the best methods for unloading". Nonetheless, they advise that grab unloading by crane is also possible but "requires properly closed grabs and anti-dust-designed hoppers supplying cargo directly to closed conveyor systems".

What is proposed for Marino Point is none of this best practice. I can accept that a fully enclosed conveying system might be costly both financially and spatially but at the very minimum, why would a vacuum hopper not be proposed? So many solutions are now available that help to minimise material losses between the grab and truck. If our statutory authorities do not insist on these at the set-up of a materials handling facility in a designated sensitive area, then what hope do we ever have of meeting our legislative requirements?

Neither washwater from cargo holds nor material from the sweeping of decks have been mentioned at all either in the planning application or by Cork County Council.

The Coalition Clean Baltic estimates conservatively that 0.05% of bulk cargo is lost due to unloading operations and cleaning of ship holds. If the same conservative estimate were to apply at the Marino

Point jetty, the consequences would be 75 tonnes of fertiliser posing additional risk to the Lough Mahon and Great Island Channel waters.

The planning application outlines two surface water drainage systems on the Marino Point site, one for the Gouldings facility and the second for the jetty. Each is to have its own retention tank. Both retention tanks would also serve as fire water tanks. Each system is to have a TOC monitor on the outfall and a system of valves whereby if the discharge water is out of compliance, it would be diverted to the relevant retention tank. Surface water discharges also can be manually diverted to the retention tank as an operational procedure in the event of a spill or contamination.

Of particular concern is the protection that system would provide at the jetty where multiple users would have both operation of and responsibility for the drainage system and associated retention tank.

Section 7.3.3.1 of the EIAR tells us that the management and disposal of contaminated surface water would be the responsibility of the individual jetty user. Bearing in mind that the jetty could potentially host three and more ships each week, who is the jetty user? Is it each shipping company? Is it Gouldings when bulk fertiliser is being offloaded and the BMDC Terminal Manager otherwise?

Section 7.4.2.2 tells us that contaminated water retained in the tank should be dealt with within two days so the tank is available for the next jetty user. Further Information submitted in December 2021 states that the Port of Cork's schedule of shipping should ensure that the retention tank will be available when needed. However, Further Information submitted in October 2021 says that if the tank is full and a fertiliser ship is due, unloading would be delayed until the tank was emptied.

Q15 of the October 2021 Further Information advises that out of tolerance surface water would be retained in the tank until it is diluted and comes within the tolerances for discharge to the harbour. How could it become diluted when the retention tank is used only for holding contaminated water? Would water be deliberately added to achieve dilution? Or is it that the contaminated water would be settling rather than diluting? Realistically, if settling, how could that happen within the requisite two days? And how would dilution be guaranteed within two days? Would the responsible jetty user wait for the contaminated water to dilute or clean itself to tolerance within the two days? And if that jetty user were to hold out until the last minute hoping that they wouldn't have to incur the expense of a licensed waste contractor, could a licensed waste contractor be guaranteed to come at the last minute? Nor has the issue of tidal restriction of the discharge been addressed. The Gouldings discharge is tidally restricted, so would that at the jetty be tidally restricted too? How frequently would this happen? How would it affect the potential need to discharge a full retention tank in preparation for an incoming ship?

We individually, collectively and all of our statutory authorities have a responsibility for the waters of Lough Mahon, the Great Island Channel and its designated habitats. It behoves all of us to employ the best technology and robust methodologies such that critical processes, habitats and species can be conserved and protected. Only this way can we provide space for sustainable economic development. In the absence of the kind of integrated management plan recommended by the European Commission

(2011) for estuaries such as Cork Harbour, each of us individually must take that responsibility on board. On no shoulders does that responsibility rest more heavily than those of our planning authorities. By not requiring BAT for bulk material handling at the Marino Point jetty, I respectfully ask the Board to consider that Cork County Council has failed in that regard.

3. No alternatives to a development that is premature at the proposed location have been considered

EU legislation on Environmental Impact Assessment, most recently outlined in Directive 2014/52/EU, requires the information provided in an EIAR to include a description of the “reasonable alternatives” considered when an application for a proposed project is being developed:

“A description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment”.

European Commission guidance (2017) is that consideration of alternatives at screening stage should include consideration of:

- *Alternative strategies, .e.g. to manage demand or reduce losses rather than develop a new resource*
- *Alternative sites or routes for all or part of the project*
- *Alternative technologies and raw materials*
- *Alternative layouts or designs*
- *Alternative environmental measures.*

The Office of the Planning Regulator (2018) advises that a description of each of these alternatives needs to be included in the EIAR in a *reasonable* way. There is no need to go in depth into each of them but those that are relevant to the project and its specific characteristics do need to be described, as do the key environmental issues associated with each.

In the case of this development proposed by Gouldings/BMDC for Marino Point, no alternatives at all have been described. No alternative technologies have been discussed, no alternative material handling methods at the jetty, no alternative environmental mitigation considerations, no alternative methods of transport and no alternative locations.

For example, so many technologies for unloading bulk materials at the jetty would be an improvement over that proposed. These are not even discussed. Under Further Information submitted in October 2021, the applicants simply volunteer that it considers:

‘a vacuum system or other enclosed offloading system [not] warranted given the effectiveness of standard operating procedures for this cargo type (grab and hopper) as proposed for Belvelly Port Facility and which have proven to be effective at the deep water berth at Ringaskiddy’.

There is no discussion as is required by the European Commission on the environmental benefits the alternative enclosed conveying system would bring. The Further Information simply suggests that an enclosed conveying system would not be commercially viable for Gouldings and would inhibit the ability of Gouldings to relocate from the City Centre. However European guidance (EC, 2017) is clear that an alternative should not be ruled out simply because it would cause inconvenience or cost to the developer. At least the required considerations should be given in the context of environmental benefit. Nobody expects the financially impossible but there is plenty of scope for consideration of simpler and less costly alternatives to a fully enclosed system and the benefits that these would bring to the sensitive Marino Point environment.

Whilst it is acknowledged that being water dependent, the range of alternative locations for the proposed development are limited, they are not impossible. Section 3.4.1 of the EIAR simply states:

“Taking account of supporting policy objectives and the suitability of site conditions, the Belvelly Port Facility was the only site considered for development of the proposed new agricultural fertiliser facility”,

whilst any discussion of alternative locations for enhanced jetty use was ruled out in Section 3.4.2:

“The Ringaskiddy DWB is currently operating near to full capacity. As such is it not suitable for additional cargo without further development. There is also a development underway at Ringaskiddy for a new Cork Container Terminal. This development will allow for the relocation of the existing Tivoli CCT to Ringaskiddy but will not have the capacity to cater for break bulk and bulk cargo. Ringaskiddy is therefore not a suitable site for the proposed additional port use of the jetty.”

In 2015, An Bord Pleanála granted planning permission for development of what is now the new Cork Container Terminal. The full scope of the planning permission granted at that time was for two berths at Ringaskiddy East, one for containers only and a 314 metre multipurpose berth capable of accommodating vessels carrying a range of different cargoes including containers, freight and general cargoes. In addition, it gave planning permission at for a new 182 metre extension to the existing Deepwater Berth at Ringaskiddy West and surfacing of port lands at Ringaskiddy East to provide operational areas.

In Section 3.2.2.1 of the Environmental Impact Statement accompanying their planning application for the Ringaskiddy Port Redevelopment, the Port of Cork stated that *“the new berth extension will be primarily used for the importation of bulk materials such as animal feeds and fertilisers and general cargoes”*.

Although the Ringaskiddy East part of the project is close to completion, the permitted extension of the existing bulk berth at Ringaskiddy West has not begun. Why is this not a reasonable alternative to the proposed enhanced jetty use at Marino Point? Why would it be necessary to acquire planning

permission to develop a new fertiliser handling area when permission has already been received for an unrealised fertiliser handling area?

Section 3.3.2 of the EIAR accompanying this planning application outlines why Marino Point is considered a viable site for additional use of the jetty to facilitate cargo vessels:

- *Marino Point provides a suitable alternative berth to the City Quay. So does the permitted expansion of Ringaskiddy West.*
- *Marino Point provides a natural 10 metre draft and 230 metre berth. The permitted expansion of Ringaskiddy West has a deeper draft and a 183 metre berth with potential for spill-over into both the existing bulk berth at Ringaskiddy West and the new multi-purpose berth at Ringaskiddy East.*
- *Marino Point provides for improved efficiency of port operations, saving time and eliminating tidal restrictions. The permitted expansion of Ringaskiddy West has no tidal restrictions and is further downstream than Marino Point, saving yet more time.*
- *This is in line with current global shipping trends which is to reduce emissions and to promote more environmentally friendly practices. The EIAR says that the same practices and handling methodologies are currently employed at Ringaskiddy West. Using a permitted expansion and consolidating operations at a single location would further reduce emissions and promote environmentally friendly practices.*
- *Marino Point has the capacity to accommodate various cargoes that would normally be catered for at the City Quays. The permitted expansion of Ringaskiddy West has similar capacity to accommodate these same cargoes. Permission for the expansion was sought for this purpose.*
- *The required move away from the City Quays which is in line with policy will require the provision of alternative berthing facilities.*

This last point of justification is of course true: to move from the City Quays would require alternative berthing facilities and, as pointed out in Section 3.3.1 of the EIAR, Marino Point is zoned for industrial use activity. But whilst it is clear that policy supports the use of Marino Point for marine-related functions and industry, is the currently proposed Gouldings/BMDC development actually in line with this policy?

In this regard, I respectfully ask the Board to consider that it is not in line with policy that there would be any significant use of Marino Point at the present time.

Objective TM 5-2 of the Cork County Development Plan 2014 recognises the “key role that Marino Point can play in providing an alternative relocation option for some of the port related uses that could best be served by rail transport taking account of residential amenity, tourism and recreation”. But rail transport is not part of the Gouldings/BMDC proposal. The current proposal is for port-related uses that rely on road transport.

The Cobh Municipal District Local Area Plan 2017 assigns Marino Point with a Special Policy Area zoning objective to facilitate its development for port-related industrial development. However Section 3.2.36 points out that the R624 is Great Island's only link to the mainland and that the road experiences serious capacity issues at peak times, is poorly aligned in many parts and contends with flooding problems at Belvelly Bridge. Section 3.2.9 expresses concern about the lack of an alternative road access route for emergency services should this only route become blocked while Section 3.2.66 states that:

“in the absence of an upgrade of the R624 along its entire length to Cobh and the replacement or upgrading of both Slatty and Belvelly Bridges, the existing road network will not be capable of supporting the level of traffic associated with the target growth for the town”.

The substandard nature of the R624 and the two bridges to accommodate traffic demand has been long recognised. The Midleton Electoral Area Local Area Plan 2011 considered with regard to Marino Point that

“Development based on the utilisation of the rail line could proceed in the short term, however proposals involving significant traffic intensification cannot be permitted to proceed in the absence of the upgrading of the R624 regional road.”

Traffic associated with the Gouldings/BMDC proposed development would form 38% of heavy vehicles along the R624 from Belvelly Bridge to Marino Point and 21.8% of heavy vehicles north of the L2989 at Belvelly Bridge.

This was similarly recognised by the Cobh Town Council Plan 2013. Section 9.2.4 worried that

“as the only fixed link to the mainland, Belvelly Bridge carries all Heavy Goods Vehicle traffic to the town and the restricted width of the bridge increases the risk of a bridge parapet strike by a HGV, the repair of which would effectively close off the only means of road access to the whole of Great Island”.

Section 9.2.1 noted that

“Belvelly Bridge is a 200 year old stone arch bridge with a carriageway width of only 5.5m leading to capacity issues and has been subject to periodic flooding. The R624 is poorly aligned in parts and experiences serious capacity issues at peak commuting times”.

The Town Council in Section 9.2.7 also noted that whilst the governing Midleton Electoral Area Local Area Plan 2011 proposed an 80 hectare masterplan development at Ballynoe and supported development at Marino Point, the scale of envisaged growth would require a *“considerable investment in the upgrading of the roads infrastructure, including improvements along the entire length of the R624 i.e. including that portion between Marino Point and the town and also improvements to Slatty Bridge, a Protected Structure”.*

Policy Objective 9 of the Cork Metropolitan Area Strategic Plan (MASP) 2020 includes upgrade of the R624 linking the N25 to Marino Point and Cobh subject to feasibility, planning and environmental assessment. It recognises the opportunity to optimise the rail connection, deep water wharf facilities and utilities connections for port/marine industry-related activity as being an economic enabler for Cobh. It defines infrastructural priorities to achieve this opportunity as being rail connectivity and upgrade of the R624.

Policy Objective 13 of the Cork MASP provides specific support for the Port of Cork, for the relocation of port and SEVESO activity from the city docklands and for investment in the “key interventions” that will drive forward the potential of key Cork Harbour assets, including Marino Point. Presumably one such key intervention is, as identified in Policy Objective 9, upgrading of the R624.

There is no doubt but that policy supports the use of Marino Point for port-related industry. However, concurrently, that policy recognises that this brownfield site can be enabled only by significant upgrading of the R624. Without this, the only circumstances under which Marino Point could play an immediate role in accommodating some of the City Quays activity is to activate the use of rail transport.

My language here reflects that of the Board’s Senior Inspector in his report on the Ringaskiddy Port Redevelopment in 2014/15. Paragraph 10.5.14 of his report considered that

“Marino Point has immediate potential to handle bulk cargoes transported to or from the port by rail. Handling non-rail cargoes at this location will require the upgrading of the R624 linking the site to the N25.”

The concept of TEN-T or the Trans-European Transport Network policy is to develop a Europe-wide network of railway lines, roads, inland waterways, maritime shipping routes, ports and airports with a view to multimodal connectivity and achieving greater social, economic and territorial cohesion across the EU (EC, 2022). As a Tier 1 Port, the Port of Cork is part of the TEN-T Core Network. The Core Network comprises the key connections linking the most important nodes.

The benefits of multimodality are echoed by the National Ports Policy (2013). Although it acknowledges that in a country as small as Ireland, the road network will continue to dominate freight transport, the policy emphasises the importance that ports would have the potential to offer multi-modal distribution networks.

During the oral hearing into the then proposed Ringaskiddy Port Redevelopment, significant consideration was given to the role of rail transport in the Port of Cork’s future plans. The Senior Inspector recognised the Port of Cork as being a Core Port under the European TEN-T regulations (1315/2013). He considered the requirements of the TEN-T regulations to be clear: rail and road access is required by Core Ports by 2030, except where physical constraints prevent such connections. He observed that in seeking planning permission for Ringaskiddy which was served only by road, the Port of Cork had relied on the potential of rail connectivity to Marino Point as satisfying the requirement for intermodality at the port. During that oral hearing, the Port of Cork submitted that Tivoli’s rail connection could fulfil the multimodality role in the shorter term whilst the Marino Point rail connection would fulfil the multimodality requirement in the longer term.

I therefore respectfully ask the Board to consider that to activate Marino Point without a primary reliance on its rail connection in advance of upgrading of the R624 is not in compliance with local, regional, national or European policy.

In this regard I would once again ask that we examine Objective TM 5-2 of the Cork County Development Plan 2014:

“Recognises the key role that Marino Point can play in providing an alternative relocation option for some of the port related uses that could best be served by rail transport taking account of residential amenity, tourism and recreation.

Key words here are **residential amenity**. During consultation on this planning application, residents living along the R624 at Belvelly made submissions to Cork County Council. They described how they have no traffic calming, no pedestrian crossing, no footpaths and no bus stop. Such is the narrowness of the road that on occasion, trucks clip their front garden walls. They cannot cut their front boundary hedges. They commented on the impact of heavy traffic to and from Cork Dockyard and their worry that as the Cross River Ferry is weather-dependent, some day a situation may arise where emergency services cannot get to the Great Island. They reminded Cork County Council that the cruise liner season starts in March and that from then, some 100 cruise liners visit Cobh during the course of the year. Each cruise liner is serviced by approximately 50 buses, all of which travel the R624 to Belvelly Bridge. Although submissions from these residents describe an existence that virtually has them prisoners to this over-capacity, substandard regional road, their voices were largely ignored in the Council’s decision-making.

The Health & Safety Authority concurs with the residents’ concerns in relation to emergency services. The North Lee Environmental Health Service of the HSE advised Cork County Council to consider each aspect of the road usage highlighted by these residents, noting that what the residents were describing in their submissions did not reconcile with data presented in the EIAR accompanying the planning application. They expressed concern about local air quality and their reservation at the approach taken in the EIAR in this regard.

In assessing the planning application for the proposed Gouldings/BMDC development, the Traffic & Transport section of Cork County Council noted that the R624 has neither cycle nor pedestrian facilities, nor do the applicants make any proposals for pedestrian and cyclist mitigation. The section’s assessment notes two passing trucks need to yield to one another at a pinch point on the Great Island side of Belvelly Bridge. At six locations between Marino Point and Belvelly, heavy vehicles are within 400mm when passing. At four other locations, they are within 300mm when passing. As some ammonium nitrate fertilisers are classified as “dangerous goods” to which the Agreement Concerning the International Carriage of Dangerous Goods by Road applies, this is essentially a scenario where a truck carrying dangerous goods going in one direction would pass a truck carrying logs or some similar cargo going in the other direction with no greater distance between them than the length of a primary school ruler.

There is no way to dress this up. This is not the “residential amenity” required by Objective TM5-2.

The photograph below is from An Garda Síochána’s Twitter account and can be accessed at <https://twitter.com/gardatraffic/status/486422147964088320>. This is a wind turbine blade leaving the Port of Cork at Ringaskiddy under escort. Further Information submitted in October 2021 clarifies that the cargo types for which planning permission is being sought includes off-shore turbines and wind

turbine elements. In other words, permission is being sought for loads like this to travel the R624 and cross Belvelly Bridge. It appears to me that a proposal like this is not even physically possible.



Conclusion

Whilst land use planning objectives may support the Gouldings/BMDC application for a fertiliser factory and enhanced use of the jetty at Marino Point, I ask the Board to consider that infrastructural policy, environmental policy and policy for residential amenity do not. In the absence of a proposal to transport cargo by rail, this application is premature. In the absence of a comprehensive and honest assessment of the potential impact of night-time noise on Passage West, this application is incomplete. In the absence of best available technology to minimise the impact of bulk discharges on designated the habitats and waters of Lough Mahon and the North Channel, this application is irresponsible.

I therefore ask the Board to refuse this planning application.

Yours faithfully,

Marcia D'Alton, B.E., M.Eng.Sc.
Independent Member, Cork County Council